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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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<b>Office Action Summary</b>	<b>Application No.</b> 10/730,365	<b>Applicant(s)</b> HUGHES ET AL.	
	<b>Examiner</b> Glenford Madamba	<b>Art Unit</b> 2451	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/24/2011</u> .                                               | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is in response to Claim Amendments and remarks filed by Applicant's representative on March 7, 2011.

#### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 7, 2011 has been entered.

#### ***Response to Amendments***

1. With respect to Applicant's amendments filed on March 7, 2011, the claim amendments and associated remarks have been fully considered, but are now considered moot in light of new grounds of rejection provided in this Office Action.

***Claim Rejections - 35 USC § 101***  
***(Computer Program Product)***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 56 and 58 are rejected under 35 U.S.C. 101 because the claims do not fall under or within a statutory category of invention (i.e., process, machine, manufacture, composition of matter). In particular, the claims are directed to a “computer program product including computer readable medium having instructions stored thereon...” and may thus reside on any data storage medium used by a computer system.” While the description cites statutory examples of data storage mediums (i.e., floppy disk, compact disc, hard disk, DVD, ROM, RAM, magnetic tape, etc.), the Office notes that the recitation of a “computer program product” that may reside ‘on *any* data storage medium” used by a computer system, allows for the inclusion of impermissible data storage mediums, such as a signal or carrier wave, and is thus considered non-statutory. Applicant is requested to make the appropriate corrections to the claim language (i.e., rewrite ‘computer readable medium’ to ‘non-transitory computer readable medium’) and/or written description in order to comply with 35 U.S.C. 101 statutory claim requirements.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 9, 12-13, 15, 18-19, 22-23, 26, 28-31, 33, 35-36, 41-45, 47, 49 and 55-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strasser et al (hereinafter Strasser), U.S. Patent Publication Us 2003/0185238 A1 in view of Kitazawa et al (hereinafter Kitazawa), U.S. Patent Publication 2005/0010960 and in further view of Lenihan et al (hereinafter Lenihan), U.S. Patent 6,169,843 and Anderson et al (hereinafter Anderson), U.S. Patent Publication 2006/0093045 A1.

As per claims 1, 3, 18, 56, 57, 60, 61 and 63, Strasser discloses substantial features of the invention, such as “receiving a multimedia data stream including first content containing first content portions (e.g., MPEG type Transport Stream) [0002] [claim 19, pg. 6] (e.g., Multiple Program Transport Stream 105 comprising one or more programs P0, P1, or P2, etc.), as well as “analyzing the first content to detect sets of related first content portions (e.g., Transport Stream Parser 110 may be used to select only packets

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pertaining to a 'subset' of data) (e.g., "Selection of the 'data streams' and data packets to be taken from the multiple program transport stream may be made by a software application) [0019], each set defining a presentation group for the first content (e.g., 'portions' of Programs P0 or P1 or P2 or ....Pn, having a "common" PID or attribute, such as P0<sub>1</sub>, P0<sub>2</sub>, P0<sub>3</sub>, ...P0<sub>n</sub>) [0024] [Fig. 2].

As part of his invention, Strasser also expressly discloses particular features, such as generating transport packets for a specifically 'selected' presentation group or program (e.g., "timestamp module 150 generates a timestamp for every transport packet of SPTS 115, and the 'timing' is used to determine the time at which the transport packet must be presented") [0020-0021] [0023].

However, while Strasser discloses substantial features of the invention, as above, he does not explicitly disclose the additional recited features of the method further comprising "a multimedia stream for one or more programs, wherein the multimedia data stream is a time-based sequence of packets encoded according to a first content format, generating a *private* transport packet for each presentation group"; creating second content by embedding the private transport packet for *each* presentation group in the multimedia stream"; and storing the second content" are more expressly taught by Kitazawa in a related endeavor.

Kitazawa discloses as his invention a video multiplexing device and a video data multiplexing control method for compressing and encoding a plurality of program data including video and multiplexing them, an encoded stream multiplexing device and a method for multiplexing encoded streams, and an encoding device and method for

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encoding video data [Abstract] [0001]. Specifically, Kitazawa discloses the additional recited features of the method further comprising “a multimedia stream for a single program, wherein the multimedia data stream is a time-based sequence of packets encoded according to a first content format (Kitazawa: e.g, expressly discloses one or more encoded Transport Streams TS1, TS2...TSn for respective one or more Programs P1, P2....Pn, comprising Video / Audio packets V1 / A1, V2 / A2....Vn / An) [Figs. 3, 6 and 7] (e.g., discloses a plurality of encoding means for encoding ‘program data’ respectively including video data and outputting resultant encoded streams as ‘video transport stream packets’...) [0024] [0032]; “generating a *private* transport packet for each presentation group” (e.g., ‘Transport Private Data’) [Figs. 12 & 13] [0052-0053] [0093-0097] (e.g, “Forming a Private Packet” \_S104) [Fig. 19]; creating second content by embedding the private transport packet for *each* presentation group in the multimedia stream” (e.g., Kitazawa expressly discloses embedding / inserting ‘private packet’\_53 into the encoded audio / video transport stream) [Figs. 15 & 16] [0055-0056] [0098-0099] [0102] [0108]; and storing the second content” (Kitazawa: e.g., via Memory Circuit 116) [Fig. 11].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify and/or combine Strasser’s invention, with the above said features, as disclosed by Kitazawa, for the motivation of providing a method that efficiently transmits data for statistical multiplexing which is required for control using statistical multiplexing [Abstract] [0023].

Further, while the combination of Strasser and Kitazawa discloses substantial features of the invention as above, the combination does not explicitly disclose the additional recited feature of wherein the transport packet includes *metadata* 'derived' from at least one of the first the content portions of the respective presentation group, the metadata containing information allowing modified production of the content in a manner different than a first production of the content defined by the first content format. Nonetheless, the said feature is disclosed by Lenihan in a related endeavor.

Lenihan discloses as his invention a method for recording and playback of audio-video transport stream packets including multiplexed audio, video and other data streams, and generated according to an MPEG-2 standard. As part of his invention, Lenihan teaches that in a record mode, 'arrival timestamp' (metadata) is generated for each input transport packet' to be recorded in the peripheral storage device, which indicates the arrival time of the corresponding packet in the recording system. Each of the transport packets are then stored with their corresponding arrival timestamps. In a playback mode, the transport packets and their corresponding arrival timestamps are retrieved from the storage device and the arrival timestamps are utilized to direct synchronous delivery of the transport packets to, for example, a decoder or a transport stream broadcast system [Abstract] [Fig. 3a] [col 2, L60 – col 3, L2]. Lenihan also discloses a packet elementary stream {PES} packet structure that separates long elementary streams into more manageable units ('transport packets'), and which permits the attachment of *timing, identification and control information* (metadata).



Lenihan also discloses that the transport packets may be of the program specific information {PSI} type or 'private' data type [col 4, L3-65] [Fig. 1a].

In particular, Lenihan expressly discloses the additional recited feature of wherein the transport packet includes *metadata* 'derived' from at least one of the first the content portions of the respective presentation group, the metadata containing information allowing modified production of the content in a manner different than a first production of the content defined by the first content format (Lenihan: e.g., "the arrival timestamp may be generated using an MPEG-2 system time clock {STC} and may be configured in an MPEG-2 program reference {PCR} format. Alternatively, the arrival timestamp may be generated *using PCRs included within the incoming transport packets.*") [col 3, L6-11]

It would thus be obvious to one of ordinary skill at the time of the invention to modify the combination of Strasser and Kitazawa with the above said additional feature, as disclosed by Lenihan, for the motivation of providing improved for recording and playback of transport streams [Lenihan: col 2, L52-58].

Moreover, while the combination of Strasser, Kitazawa and Lenihan discloses substantial features of the invention as above, they do not explicitly disclose the additional recited feature of the metadata containing 'information', "wherein the information allows modified production including at least one access point", and wherein "said access point includes at least one pointer to timing data in the first content". Nonetheless, the said features are disclosed by Anderson in a related endeavor.

Anderson discloses as his invention a method and apparatus for splicing programs in the MPEG domain, where program data is carried in MPEG transports streams {TS} of data packets. According to the invention, 'control data objects' are established for each data packet for storing *time references* and *data packet status information*, and are queued in different queues dependent on the status of a group of data packets. Using the control data objects, data packets associated to selected control data objects are assembled to an output stream of data packets [Abstract] [Fig. 1] [0031]. As part of invention, Anderson also expressly discloses, like Lenihan, the creation of 'metadata' (e.g., metadata structure) [0053] by means of the *control data objects*, which allows for manipulation and experimentation with until 'in-points' and 'out-points' are found and a satisfactory splice can be arranged [0031].

Specifically, Anderson discloses the additional recited feature of the metadata containing 'information', "wherein the information allows modified production including at least one access point" (Anderson: e.g., 'metadata' such as *control object information*, established for each data packet and which stores *time references* and *data packet status information*) [0031] (e.g., "inserting a new transport packet, copying frame data to the new packet, and pad as needed" / "insert a transport packet between the cut packet and the 'new packet' containing a new valid PES header with timestamps") [0085-0087], and wherein "said access point includes at least one pointer to timing data in the first content (e.g., output stage pointers) [0031] (e.g., in-points / out-points) [0048] (e.g., timestamps are computed and stored if not already present, and other relevant information is also stored in the 'separate data structure'; for example, a reference to

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the transport packet that contains a potential 'cut point') [0078] (e.g., 'pointer' field) [0161].

It would thus be obvious to one of ordinary skill at the time of the invention to modify the combination of Strasser, Kitazawa and Lenihan with the above said additional feature, as disclosed by Anderson, for the motivation of providing a method and system for concatenating or splicing streams of digital data, as well as to facilitate or achieve seamless splicing [Lenihan: 0002] [0020-0021].

Claims 3, 18, 56, 57, 60, 61 and 63 recite similar limitations as claim 1, are distinguished only by their statutory category, and thus rejected on the same basis.

As per claims 2, 28, 42, 58 and 59, while Strasser discloses substantial features of the invention, such as the features of "generating transport packets for a specifically 'selected' presentation group or program (e.g., "timestamp module 150 generates a timestamp for every transport packet of SPTS 115, and the 'timing' is used to determine the time at which the transport packet must be presented") [0020-0021] [0023], wherein the transport packet includes *metadata* derived from the content portions of the respective presentation group (e.g., specific packet identifiers 'PID') [0019] (e.g., 'common PID' found within data packets of a specific program {i.e., P0 'PID'}) [0024], the metadata containing information allowing modified production of the content in a manner different than a first production of the content defined by the first content format" (e.g., memory controller 140 'combines' the transport packets with their respective timestamps 124 to generate 'time-stamped single program transport packets {SPTP}

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145) [0022] [Fig. 2]; the recited features of “receiving a multimedia data stream for a program, wherein the multimedia data stream is a time-based sequence of packets encoded according to a first content format, and wherein the multimedia data stream includes second content that includes first content, and private transport packets, the first content containing first content portions that are arranged as a series of presentation groups, each presentation group including related first content portions and one of the private transport packet, each private transport packet containing metadata that allows modified production of the first content in a manner that is different than a first production of the first content defined by the first content format; producing a content stream for presentation to the client device using the metadata contained in at least one of the private transport packets associated with at least one of the presentations groups of the first content portions in the second content to produce a modified production of at least one of the first content portions in a manner that is different than the first production of the first content defined by the first content format; and presenting the content stream to the client device” are more expressly taught by Kitazawa in a related endeavor.

Kitazawa discloses as his invention a video multiplexing device and a video data multiplexing control method for compressing and encoding a plurality of program data including video and multiplexing them, an encoded stream multiplexing device and a method for multiplexing encoded streams, and an encoding device and method for encoding video data [Abstract] [0001]. Specifically, Kitazawa discloses the additional recited features of the method further comprising “receiving a multimedia data stream

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for a program, wherein the multimedia data stream is a time-based sequence of packets encoded according to a first content format, and wherein the multimedia data stream includes second content that includes first content, and private transport packets, the first content containing first content portions that are arranged as a series of presentation groups, each presentation group including related first content portions and one of the private transport packet, each private transport packet containing metadata that allows modified production of the first content in a manner that is different than a first production of the first content defined by the first content format; producing a content stream for presentation to the client device using the metadata contained in at least one of the private transport packets associated with at least one of the presentations groups of the first content portions in the second content to produce a modified production of at least one of the first content portions in a manner that is different than the first production of the first content defined by the first content format; and presenting the content stream to the client device” (Kitazawa: e.g., expressly discloses one or more encoded Transport Streams TS1, TS2...TSn for respective one or more Programs P1, P2.....Pn, comprising Video / Audio packets V1 / A1, V2 / A2....Vn / An) [Figs. 3, 6 and 7] (e.g., discloses a plurality of encoding means for encoding ‘program data’ respectively including video data and outputting resultant encoded streams as ‘video transport stream packets’...) [0024] [0032]; (e.g., ‘Transport Private Data’) [Figs. 12 & 13] [0052-0053] [0093-0097] (e.g., “Forming a Private Packet” \_S104) [Fig. 19]; (e.g., Kitazawa expressly discloses embedding / inserting ‘private packet’\_53 into the encoded audio / video transport stream) [Figs. 15 & 16] [0055-0056]

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[0098-0099] [0102] [0108] (e.g., discloses outputting one or more encoded streams as video transport stream packets, and outputting the encoding 'difficulty information' as 'private transport stream packets', respectively receiving a plurality of transport streams including the video transport stream packets and private transport stream packets to generate a multiplexed transport stream) [0034].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify and/or combine Strasser's invention, with the above said features, as disclosed by Kitazawa, for the motivation of providing a method that efficiently transmits data for statistical multiplexing which is required for control using statistical multiplexing [Abstract] [0023].

Further, while the combination of Strasser and Kitazawa discloses substantial features of the invention as above, the combination does not explicitly disclose the additional recited feature of wherein the transport packet includes *metadata* 'derived' from at least one of the first the content portions of the respective presentation group, the metadata containing information allowing modified production of the content in a manner different than a first production of the content defined by the first content format. Nonetheless, the said feature is disclosed by Lenihan in a related endeavor.

Lenihan discloses as his invention a method for recording and playback of audio-video transport stream packets including multiplexed audio, video and other data streams, and generated according to an MPEG-2 standard. As part of his invention, Lenihan teaches that in a record mode, 'arrival timestamp' (metadata) is generated for

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each input transport packet' to be recorded in the peripheral storage device, which indicates the arrival time of the corresponding packet in the recording system. Each of the transport packets are then stored with their corresponding arrival timestamps. In a playback mode, the transport packets and their corresponding arrival timestamps are retrieved from the storage device and the arrival timestamps are utilized to direct synchronous delivery of the transport packets to, for example, a decoder or a transport stream broadcast system [Abstract] [Fig. 3a] [col 2, L60 – col 3, L2]. Lenihan also discloses a packet elementary stream {PES} packet structure that separates long elementary streams into more manageable units ('transport packets'), and which permits the attachment of *timing*, *identification* and *control information* (metadata). Lenihan also discloses that the transport packets may be of the program specific information {PSI} type or 'private' data type [col 4, L3-65] [Fig. 1a].

In particular, Lenihan expressly discloses the additional recited feature of wherein the transport packet includes *metadata* 'derived' from at least one of the first the content portions of the respective presentation group, the metadata containing information allowing modified production of the content in a manner different than a first production of the content defined by the first content format (Lenihan: e.g., "the arrival timestamp may be generated using an MPEG-2 system time clock {STC} and may be configured in an MPEG-2 program reference {PCR} format. Alternatively, the arrival timestamp may be generated *using PCRs included within the incoming transport packets.*") [col 3, L6-11]

It would thus be obvious to one of ordinary skill at the time of the invention to modify the combination of Strasser and Kelly with the above said additional feature, as disclosed by Lenihan, for the motivation of providing improved for recording and playback of transport streams [Lenihan: col 2, L52-58].

Moreover, while the combination of Strasser, Kitazawa and Lenihan discloses substantial features of the invention as above, they do not explicitly disclose the additional recited feature of the metadata containing 'information', "wherein the information allows modified production including a pointer to an access point for each presentation group, the access point including timing data in the first content". Nonetheless, the said features are disclosed by Anderson in a related endeavor.

Anderson discloses as his invention a method and apparatus for splicing programs in the MPEG domain, where program data is carried in MPEG transports streams {TS} of data packets. According to the invention, 'control data objects' are established for each data packet for storing *time references* and *data packet status information*, and are queued in different queues dependent on the status of a group of data packets. Using the control data objects, data packets associated to selected control data objects are assembled to an output stream of data packets [Abstract] [Fig. 1] [0031]. As part of invention, Anderson also expressly discloses, like Lenihan, the creation of 'metadata' (e.g., metadata structure) [0053] by means of the *control data objects*, which allows for manipulation and experimentation with until 'in-points' and 'out-points' are found and a satisfactory splice can be arranged [0031].



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Specifically, Anderson discloses the additional recited feature of the metadata containing 'information', "wherein the information allows modified production including a pointer to an access point" (Anderson: e.g., 'metadata' such as *control object information*, established for each data packet and which stores *time references* and *data packet status information*) [0031] (e.g., "inserting a new transport packet, copying frame data to the new packet, and pad as needed" / "insert a transport packet between the cut packet and the 'new packet' containing a new valid PES header with timestamps") [0085-0087], and wherein "said access point includes timing data in the first content (e.g., output stage pointers) [0031] (e.g., in-points / out-points) [0048] (e.g., timestamps are computed and stored if not already present, and other relevant information is also stored in the 'separate data structure'; for example, a reference to the transport packet that contains a potential 'cut point') [0078] (e.g., 'pointer' field) [0161].

It would thus be obvious to one of ordinary skill at the time of the invention to modify the combination of Strasser, Kelly and Lenihan with the above said additional feature, as disclosed by Anderson, for the motivation of providing a method and system for concatenating or splicing streams of digital data, as well as to facilitate or achieve seamless splicing [Lenihan: 0002] [0020-0021].

Claims 28, 42, 58 and 59 recite similar limitations as claim 2, are distinguished only by their statutory category, and thus rejected on the same basis.

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As per claims 9 and 22, Strasser discloses a method as in claim 3, wherein the data content is formatted according to MPEG (Moving Picture Experts Group) (e.g., Multimedia data stream includes an MPEG Type Transport Stream) [Claim 19, page 6].

As per claims 12, 23, 31 and 45, Strasser discloses a method as in claim 3, wherein generating metadata includes: generating time stamps for portions of the logical data stream to support replaying the logical data stream later in time (e.g., creating / generating Time Stamps) [Abstract].

Claims 23, 31 and 45 recite the same limitations as claim 12, are distinguished only by their statutory category, and thus rejected on the same basis.

As per claim 13, Strasser in view of Kelly discloses a method as in claim 12 further comprising: inserting the generated time stamps in relation to corresponding portions of the logical data stream (e.g., Time Stamped Transport Stream 145) [Fig. 2].

As per claims 15, 33, and 47, Strasser in view of Kelly discloses a method as in claim 14 further comprising: removing the metadata prior to transmitting the logical data stream to the receiver (e.g., Reconstructed SPTS 325) [Fig. 4].

Claims 33 and 47 recite the same limitations as claim 15, are distinguished only by their statutory category, and thus rejected on the same basis.

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3. Claims 4, 19, 26, 29, 30, 35, 36, 43, 44, 49, 62 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strasser in view of Kitazawa in view of Lenihan and in further view of Anderson and Kelly et al (hereinafter Kelley), U.S. Patent Publication US 2006/0093315 A1.

As per claims 4, 19, 26, 29, 35, 36, 43, 49, 62 and 64, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, as above, the additionally recited feature of generating metadata which enables serial streaming of non-contiguous portions of the logical data stream in response to commands from remote users requesting presentation of the logical data stream in a different manner than originally supported by a content format of the logical data stream is taught by Kelly in a related endeavor.

Kelly discloses as his invention various methods for producing an edited MPEG audio/video stream from first and second streams recorded in a transport stream format normally intended for broadcast purposes [Abstract]. Specifically, Kelly discloses the additionally recited feature of generating metadata which enables serial streaming of non-contiguous portions of the logical data stream in response to commands from remote users requesting presentation of the logical data stream in a different manner than originally supported by a content format of the logical data stream [Kelley: e.g., New Playback Sequence 'PBS' via Playback Control Program 'PBC') [0051-0054] [Figs. 3-5 & 7].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Kelley, for the motivation of providing a smooth playback of edited audio/video data streams in a transport stream format [0001] [0007].

Claims 19, 26, 29, 35, 36, 43, 49, 62 and 64 recite the same limitations as claim 4, are distinguished only by their statutory category, and thus rejected on the same basis.

As per claims 30 and 44, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, as above, the additionally recited feature of the method further comprising streaming first portions of the enhanced logical data stream for presentation of corresponding data content to the client while simultaneously streaming second, different portions of the logical data stream for presentation of corresponding data content to another client is taught by Kelly in a related endeavor.

Kelly discloses as his invention various methods for producing an edited MPEG audio/video stream from first and second streams recorded in a transport stream format normally intended for broadcast purposes [Abstract]. Specifically, Kelly discloses the additionally recited feature of the method further comprising streaming first portions of the enhanced logical data stream for presentation of corresponding data content to the client while simultaneously streaming second, different portions of the logical data

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stream for presentation of corresponding data content to another client [Kelley: e.g., transmitting Original File Sequence and /or 'New Data Stream' or 'New PBC Programs') [0052-0053] [Figs. 3-5].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Kelley, for the motivation of providing a smooth playback of edited audio/video data streams in a transport stream format [0001] [0007].

Claim 44 recites the same limitations as claim 30, is distinguished only by their statutory category, and thus rejected on the same basis.

4. Claims 5, 6-8, 10, 14, 17, 20, 21, 27, 37-40, 48 and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strasser in view of Kitazawa in view of Lenihan and in further view of Anderson and Barton et al (hereinafter Barton), U.S. Patent 6,233,389.

As per claims 5, 20 and 50, while the combination of Strasser, Kitazawa Lenihan and Anderson discloses substantial features of the invention, such as the recited features of creating at least one retrievable file formatted to include analyzed portions of the logical data stream and corresponding generated metadata (e.g., Time Stamped SPTS 145) [Fig. 3] and storage of the metadata in proximity to a first portion of the logical data stream (e.g. Storage 310); the additionally recited feature of generating a pointer

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identifying a relative location of a second portion of the logical data stream; and storing the pointer in relation to the first portion of the data stream is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of generating a pointer identifying a relative location of a second portion of the logical data stream; and storing the pointer in relation to the first portion of the data stream (e.g., pointers 406, 408, etc) [col 4, L55 – col 5, L2] [Fig. 4].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claims 20 and 50 recite the same limitations as claim 5, are distinguished only by their statutory category, and thus rejected on the same basis.

As per claims 6, 14, 24, 34 and 48, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, the additionally recited feature of the method further comprising interleaving the pointer between portions of the logical data stream at an access point including a data field in a known

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position relative to the first portion of the logical data stream is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of the method further comprising interleaving the pointer between portions of the logical data stream at an access point including a data field in a known position relative to the first portion of the logical data stream (e.g., 'interleaved' video and audio segments with pointers 406, 408, etc) [col 4, L55 – col 5, L2] [Figs. 3 & 4].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claims 14, 24, 34 and 48 recite the same limitations as claim 6, are distinguished only by their statutory category, and thus rejected on the same basis.

As per claims 7 and 21, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, the additionally recited feature of the method further comprising buffering contiguous portions of the logical data stream; generating multiple pointers based on the relative positions of each of multiple portions of the logical data stream; and inserting the pointers at predetermined data

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fields interleaved among portions of the logical data stream is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of the method further comprising buffering contiguous portions of the logical data stream (Barton: e.g., Audio, Video and/or Private Data Packet Buffers 410-413) [col 4, L55 – col 5, L2] [col 5, L51 – col 2, L11] [Fig. 4]; generating multiple pointers based on the relative positions of each of multiple portions of the logical data stream (Barton: e.g., pointers 406, 408, etc) [col 4, L55 – col 5, L2] [Fig. 4]; and inserting the pointers at predetermined data fields interleaved among portions of the logical data stream (e.g., 'interleaved' video and audio segments with pointers 406, 408, etc) [col 4, L55 – col 5, L2] [Figs. 3 & 4].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claim 21 recites the same limitations as claim 7, is distinguished only by their statutory category, and thus rejected on the same basis.



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As per claims 8, 37 and 51, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, the additionally recited feature of the method further comprising utilizing the pointers on playback of the logical data stream to determine which portion of the logical data stream is streamed to a user in response to receiving a command from the user to which the logical data stream is transmitted is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of the method further comprising utilizing the pointers on playback of the logical data stream to determine which portion of the logical data stream is streamed to a user (Barton: e.g., pointers 406-409) [col 4, L23 - col 5, L2] [Figs. 3 & 4] in response to receiving a command (Barton: e.g., User Control Commands, such as reverse, fast forward, play, pause, index, etc.) [col 2, L32-38] from the user to which the logical data stream is transmitted.

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claims 37 and 51 recites the same limitations as claim 8, are distinguished only by their statutory category, and thus rejected on the same basis.

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As per claims 10, 17 and 27, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, such as the recited feature of streaming the files and data content therein to receiver devices (e.g., display 14) [0046] that play corresponding logical data streams in real-time (e.g., Real Time File {RTF}) [0051] [Fig. 3]; the additionally recited feature of the method further comprising further comprising storing the file along with similarly formatted files in a semiconductor chip-based memory storage system is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of the method further comprising further comprising storing the file along with similarly formatted files in a semiconductor chip-based memory storage system [col 6, L59 – col 7, L11] [Fig. 7].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claims 17 and 27 recite the same limitations as claim 10, are distinguished only by statutory category, and thus rejected on the same basis.

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As per claims 38 and 52, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, the additionally recited feature of the method wherein the input from the client indicates to fast forward presentation of data content in the enhanced logical data stream to the client is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of the method wherein the input from the client indicates to fast forward presentation of data content in the enhanced logical data stream to the client (e.g., fast forward) [Abstract].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claims 52 recites the same limitations as claim 38, is distinguished only by statutory category, and thus rejected on the same basis.

As per claims 39 and 53, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, the additionally recited feature of the method wherein the input from the client indicates to rewind presentation of data

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content in the enhanced logical data stream to the client is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of the method wherein the input from the client indicates to rewind presentation of data content in the enhanced logical data stream to the client (e.g., reverse play) [Abstract].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claims 53 recites the same limitations as claim 39, is distinguished only by statutory category, and thus rejected on the same basis.

As per claims 40 and 54, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, the additionally recited feature of the method further comprising utilizing the metadata stored in the enhanced logical data stream to determine whether to suppress playing back an audio signal of the content stream is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user

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is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of the method further comprising utilizing the metadata stored in the enhanced logical data stream to determine whether to suppress playing back an audio signal of the content stream (e.g., pause, index, and/or fast forward through 'unwanted program material') [col 1, L15-22].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claims 54 recites the same limitations as claim 40, is distinguished only by statutory category, and thus rejected on the same basis.

As per claims 41 and 55, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, the additionally recited feature of the method wherein the content stream includes commercials that are substantially presented in real time to the client regardless of input from the client is taught by Barton in a related endeavor.

Barton discloses as his invention a multimedia time warping system. The invention allows the user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program [Abstract]. Specifically, Barton discloses the additionally recited feature of the method wherein the content

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stream includes commercials that are substantially presented in real time to the client regardless of input from the client (e.g., 'commercials') [col 1, L15-22].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said feature, as disclosed by Barton, for the motivation of providing a multimedia time warping system that gives the user the ability to simultaneously record and play back TV broadcast programs [col 1, L52-60].

Claims 55 recites the same limitations as claim 41, is distinguished only by statutory category, and thus rejected on the same basis.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strasser in view of Kitazawa in view of Lenihan and in further view of Anderson and Kovacevic et al (hereinafter Kovcevic), U.S. Patent Publication US 2002/0128823 A1.

As per claim 11, while the combination of Strasser, Kitazawa, Lenihan and Anderson discloses substantial features of the invention, the additionally recited feature of the method further comprising reserving data fields in the file for tracking the metadata is taught by Kovcevic in a related endeavor.

Kovcevic discloses as his invention system and methods for processing and parsing of transport stream data, and specifically to the parsing of audio stream data in a multiplexed data stream [Abstract] [0001]. Specifically, Kovcevic discloses the additionally recited feature of the method further comprising reserving data fields in the

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file for tracking the metadata (e.g., Optional Fields / Reserved Fields) [Figs. 1, 3 and 6-12].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination with the above said additional feature, as disclosed by Kovcevic, for the motivation of advantageously providing a system and method of receiving transport stream information that allows for more flexibility and improved performance in terms of data handling, data parsing, design implementation, data stream acquisition [0019].

6. Claims 16, 25, 32 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strasser in view of Kitazawa, Lenihan, Anderson, Barton and in further view of McLaren et al (hereinafter McLaren), U.S. Patent 6,064,794.

As per claims 16, 25, 32, and 46, while the combination of Strasser, Kitazawa, Lenihan, Anderson and Barton discloses substantial features of the invention, the additionally recited feature of the method wherein generating metadata includes: generating offset information identifying location of time stamps supporting playback of the enhanced logical data stream is taught by McLaren in a related endeavor.

McLaren discloses as his invention a method providing various reproduction modes by controlled selection of replay locations, thereby facilitating selection within a video stream or between separate video streams derived for selected trick-play speeds [Abstract] [0001]. Specifically, McLaren discloses the additionally recited feature of the

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method wherein generating metadata includes: generating offset information identifying location of time stamps supporting playback of the enhanced logical data stream (e.g., BYTE\_OFFSET\_FOR\_GOP) [Fig. 3] [col 4, L26 – col 5, L10].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Strasser and Kelly with the above said feature, as disclosed by McLaren, for the motivation of advantageously providing material, such as digitally compressed video, at speeds other than at normal play speed [col 1, L1-18].

Claims 25, 32, and 46 recites the same limitations as claim 16, are distinguished only by their statutory category, and thus rejected on the same basis.

### ***Conclusion***

1. The Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.



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2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenford Madamba whose telephone number is 571-272-7989. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/KAMAL B DIVECHA/  
Primary Examiner, Art Unit 2451

Glenford Madamba  
Examiner  
Art Unit 2151